

- 14 -

Claims

1. A method of changing a subscription information of a subscriber in a data network, said method comprising the steps of:
 - a) detecting a change in said subscription information of said subscriber;
 - 5 b) checking whether a capability of a network element (10) serving a terminal device (40) of said subscriber is still in accordance with said changed subscription information; and
 - c) initiating in response to the result of said checking step a registration procedure for registering said terminal device (40) of said subscriber to a
10 new serving network element (12).
2. A method according to claim 1, wherein said checking step comprises checking whether said serving network element (10) is still capable of serving said terminal device (40) of serving said terminal device (40) of said subscriber in view of said changed subscription information.
- 15 3. A method according to claim 1 or 2, wherein said detection step is based on a detection of a subscriber profile update.
4. A method according to claim 1 or 2, wherein said detection step is based on a detection of a subscription of said subscriber to a new service.
- 20 5. A method according to any one of the preceding claims, wherein said checking step is performed on the basis of a capability information added based on said detection step to a response message of a re-registration procedure initiated by said terminal device (40).
6. A method according to claim 5, wherein said re-registration procedure is initiated by said terminal device (40) in response to a de-registration procedure initiated when a change of said subscription information has been detected in said detection step.
25
7. A method according to claim 5, wherein said re-registration procedure is a periodic re-registration procedure initiated at predetermined intervals.

- 15 -

8. A method according to any one of the preceding claims, wherein a configuration information is provided for determining subscribed services needing predetermined serving network elements.
- 5 9. A method according to any one of claims 1 to 4, wherein said checking step comprises the steps of
transmitting a capability query comprising an information indicating at least one required capability to said serving network element (10),
comparing capabilities of said serving network element (10) with said information about said at least one required capabilities, and
10 receiving an acknowledgement indicating the result of said comparing step from said serving network element (10).
10. A method according to any one of claims 1 to 4, wherein said checking step comprises the steps of
15 transmitting an information indicating at least one required capability and an identification of said serving network element (10) to an interrogating network element (50),
checking at said interrogating network element (50) whether said serving network element (10) fulfills said at least one required capabilities, and
20 receiving an acknowledgement indicating the result of said checking step from said interrogating network element (10).
11. A method according to claim 9 or 10, further comprising the step of sending a de-register message for de-registering said terminal device (40) to said serving network element (10) in response to the received result.
- 25 12. A method according to claim 11, wherein a re-registration procedure is initiated by said terminal device (40) in response to a message issued by said serving network element (10).
13. A method according to claim 11 or 12, wherein said de-register message includes a cause information which indicates that the reason for de-registration was a need for changing said subscriber information.
- 30 14. A method according to claim 13, wherein said cause information is used by said terminal device (40) to detect that a re-registration is required.

- 16 -

15. A method according to claim 9 or 10, wherein a selection function of said data network is initiated using said information about said at least one required capability, and a resulting identification information of said new serving network element (12) is notified to a proxy network element (30) connected to said terminal device (40).
5
16. A method according to claim 15, wherein said notification is performed using an identification of said proxy network element (30) stored at a subscriber database (20).
17. A method according to claim 16, wherein said identification is requested from said serving network element (10) using said de-register message.
10
18. A method according to any one of claims 15 to 17, wherein said selection function is performed by an interrogating network element (50).
19. A method according to claim 1, wherein said checking step is performed by requesting from said data network a capability list containing required capabilities of serving network elements.
15
20. A method according to claim 19, wherein said capability list is requested from an interrogating network element (50).
21. A system for changing a subscription information of a subscriber in a data network, said system comprising:
20
a) detecting means (20) for detecting a change in said subscription information of said subscriber;
b) checking means (50) for checking whether a capability of a network element (10) serving a terminal device (40) of said subscriber is still in accordance with said changed subscription information; and
25
c) initiating means (20; 50) for initiating in response to said checking means (50) a registration procedure for registering said terminal device (40) of said subscriber to a new serving network element (12).
22. A system according to claim 21, wherein said checking means is an interrogating network element (50).

- 17 -

23. A system according to claim 22, wherein said interrogating network element is an I-CSCF (50) of an IMS.
24. A system according to claim 22 or 23, wherein said interrogating network element (50) is arranged to perform said checking operation based on capability information received with a registration authorization response.
25. A system according to any one of claims 21 to 24, wherein said detecting means is a subscriber database (20).
26. A system according to claim 25, wherein said subscriber database is a HSS (20).
27. A system according to any one of claims 21 to 26, wherein said initiating means is a subscriber database (20) arranged to initiate said registration procedure by initiating a selection function of said data network.
28. A system according to any one of claims 21 to 26, wherein said initiating means is a subscriber database (20) arranged to initiate said registration procedure by issuing a de-register message.
29. A system according to claim 28, wherein said subscriber database (20) is arranged to transmit said de-register message to said serving network element (10).
30. A system according to claim 28 or 29, wherein said de-register message comprises a cause information.
31. A system according to any one of claims 21 to 26, wherein said initiating means is an interrogating network element (50) arranged to issue a register message to said new serving network element (12).
32. A subscriber database for storing a subscription information of a subscriber of a data network, said database (20) being arranged to detect a change in said subscription information and to initiate a registration procedure for registering a terminal device (40) of said subscriber to a new serving network element (12) in response to the result of a checking operation for checking whether a capability of a network element (10) serving a terminal device

- 18 -

(40) of said subscriber is still in accordance with said changed subscription information.

- 5
33. A subscriber database according to claim 32, wherein said subscriber database (20) is arranged to initiate said registration procedure by issuing a de-register message.
34. A subscriber database according to claim 32, wherein said subscriber database (20) is arranged to initiate said registration procedure by initiating a selection function for selecting said new serving network element (12).
- 10
35. A subscriber database according to any one of claims 32 to 34, wherein said subscriber database is a HSS (20).
36. A subscriber database according to any one of claims 32 to 35, wherein said database (20) is arranged to inhibit an unnecessary registration based on a configuration information provided at said database (20).